

Claim Amendments:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Canceled)
2. (Currently Amended) The apparatus of claim [[1]] 22 wherein there is one deposition chamber.
3. (Currently Amended) The apparatus of claim [[1]] 22 wherein the substrate heater is a multizone substrate heater.
4. (Currently Amended) The apparatus of claim [[1]] 22 wherein the exterior wall of the apparatus contains openings for multiple laser beams.
5. (Currently Amended) The apparatus of claim [[1]] 22 wherein multiple targets are mounted on the target manipulator.
6. (Canceled)
7. (Currently Amended) The apparatus of claim [[1]] 22 wherein the spool chambers are sized to accommodate from about [[4]] 2 to about [[12]] 20 spools of substrate tape.
8. (Currently Amended) The apparatus of claim [[1]] 3 wherein the multizone heater comprises three zones.
9. (Currently Amended) The apparatus of claim [[1]] 22 also containing seals in the opening in the chamber walls that maintain a selected pressure differential between the chambers.
- Claims 10-21 (Canceled)

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22. (Currently Amended) A multi-chamber vacuum coating apparatus for coating a substrate tape utilizing PLD and a reel to reel tape transport system comprising a payout spool chamber containing at least one spool of uncoated substrate tape; one or more deposition chambers; a take-up spool chamber capable of accommodating at least one spool of coated substrate tape; wherein the one or more deposition chambers comprises a substrate heater, a motorized target manipulator, and multiple targets arranged linearly along the target manipulator where the target manipulator imparts rotary and oscillatory motion to the multiple targets, the multiple targets including first and second targets, the first target comprising HTS material, the second target comprising said HTS material; the payout chamber and the deposition chamber both having an opening therein of sufficient dimension to permit at least one translating tape to be inserted therethrough; the deposition chamber and the take-up spool chamber both having an opening therein of sufficient dimension to permit at least one substrate tape to be inserted there through; the one or more deposition chambers each have the substrate heater and the target manipulator disposed therein such that the heater and the at least one target manipulator define an extended deposition zone therebetween; and the exterior wall of the apparatus contains openings for at least one laser beam, wherein the multiple targets are positioned to create multiple overlapping plumes along the extended deposition zone.

23. (New) The apparatus of claim 22 wherein the multiple targets comprise a third target, the third target comprising said HTS material.

24. (New) The apparatus of claim 22 wherein the HTS material comprises yttrium-barium-copper-oxide.